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LOYALTY PROGRAM TRACKING AND CONVERSION SYSTEM

Cross Reference to Related Applications

This application claims priority to U.S. Provisional Patent Application No.
15 60/166,017 filed 17 November 1999.

Field of the Invention

The present invention relates to tracking of loyalty programs points and
conversion of points earned or accrued under such loyalty programs. The present
invention allows for the application of such points towards the purchase of products and
20 services from various retailers.

More specifically, the present invention may provide for an Internet website that
allows the owner of points awarded by means of a loyalty or frequency program to
compile and track award points from multiple programs and to convert such points into a
universal credit or "currency" that can be applied towards the purchase of products and
25 services from a variety of retail establishments or various service providers.

Background of the Invention

Many people are members of one or more loyalty programs. Also known as frequency or loyalty programs, these programs award "points," "miles" or other credit to the members of the programs in exchange for, or based upon, the purchase of products or the use of services offered by the sponsors of the program. In some loyalty programs, the program sponsor will partner with other providers of products or services and points will be awarded based upon the use of the products or services of the partners as well.

A common example of such loyalty programs are the frequent flyer programs offered by airlines. In these frequent flyer programs, members of the program that fly on the sponsor airline or that use the lodging, transportation or other services of the airline's partners will be awarded points. When a sufficient minimum number of points have been accumulated by a member, the member can then exchange the points for airline tickets or other benefits on the sponsor's airline or affiliates.

Typical loyalty programs, such as airline frequent flyer programs, can have limited use for many members. For example, under most frequent flyer programs, points are awarded whenever a member travels on the sponsor's airline. These points are awarded based upon the distance traveled by the member. However, the programs require the accumulation of a large number of points before the points can be redeemed for free air travel. For travelers that do not fly regularly, a large amount of time will occur before the member is able to accumulate sufficient points to receive the free travel benefit. Furthermore, under some programs, the awarded points may expire if

not redeemed within a specified timeframe. Thus, a member who does not travel frequently may be in jeopardy of losing their points.

Another disadvantage of frequent flyer programs is that the obtained level of points or miles can typically be redeemed only for a free airline ticket. Additionally, the only airline for which the ticket can be redeemed is the airline sponsoring the program or its affiliates. Thus, the awards for which the points can be redeemed by the member are extremely limited.

Another disadvantage of frequent flyer programs is the limited number of seats that airlines make available for free travel. If a member does get to the appropriate number of points, there is no guarantee the points will be redeemable for a particular flight as desired by the member.

Another disadvantage of frequent flyer programs is that awarded points under one program cannot be transferred or used to accumulate awards towards most other frequent flyer programs. Thus, a member that does not consistently fly a single airline may be further hindered in reaching the required point or mile levels to redeem the miles for free travel. However, if a member attempts to consistently fly a specific airline, they will be limiting their flight choices and may also be paying a higher fare than they could obtain on a different airline.

Additionally, as each frequent flyer program is operated by a different sponsor and each frequent flyer program operates under its own specific set of policies, rules and regulations, members are responsible for verifying and monitoring their own points in each separate program in which they are enrolled. As each program operates autonomously, such monitoring can be difficult, inconvenient and cumbersome.

To aid in frequency program account monitoring and maintenance, many of the sponsors of loyalty programs allow members to access general information concerning the member's account via a World Wide Web page on the Internet. However, as each program is run separately and is not affiliated with the other programs, the specific
5 loyalty program web pages must generally be accessed separately by the member.

While the previous discussion focuses on airline frequent flyer programs, it will be appreciated that the characteristics and disadvantages of such programs can apply to any type of loyalty or frequency program. The examples involving frequent flyer programs are, however, illustrative of drawbacks of existing frequency programs.

10 In light of the numerous disadvantages and difficulties associated with loyalty programs, there is a need for a system in which points awarded under various loyalty programs could be tracked and combined to be applied towards a variety of additional awards. Furthermore, there is a need for expanding the types of products or services to which the awarded points can be applied. There is also a need for providing easy
15 shopping and purchasing of the award products and services and eliminate requests for block use of miles and/or points.

Summary of the Invention

The present invention relates to a system of tracking, computing and redeeming points awarded under a variety of individual loyalty programs. Access to the system is
20 provided to users, particularly registered members, via a computerized communications network, such as the Internet. For example, the system may be implemented so as to be viewable via the www application over a TCP/IP connection.

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The present invention meets the needs outlined above by using, for example, a World Wide Web site on the Internet to allow members of different loyalty programs to easily access information concerning their individual loyalty program points, to track the accumulation of these points and to convert the points at some point in time after they are accrued into a universal credit or "currency" that can be applied towards the purchase of a wide variety of products and services.

Once a user accesses the system, they are allowed to register to take advantage of the system or to sign in if they are existing members of the system. Based upon the information provided by the user, the user's award points under any number of participating loyalty programs will be tracked by the system and information concerning the availability of the points under each program can be provided to the user.

By accessing the system's user service, e.g. a web site, and then accessing an affiliated retailer's web site, a user can browse through information concerning the various products and services offered by the retailer towards which awarded miles or points can be applied either for purchase of products or services, or to receive a discount on such purchase. Generally, retailers may be motivated to offer goods or services through the system as a mechanism of marketing or advertising, for example, or to take advantage of market differentiation, in a manner similar to coupons or group discounts. Preferably, each retailer will determine what appropriate amount of miles, points or discount can be applied toward each purchase. The system may convert the user's loyalty program award points into a universal credit or currency either at the time that the user chooses to purchase a particular product or service, or prior to the user purchase decision. This credit or currency can then be used as a form of payment

toward the price of the products or services that the user desires to purchase. When the member purchases the product or service and upon authorization by the user, the system deducts the applicable number of award points from the appropriate loyalty program specified by the user. The information concerning the user's points may then be updated in the system and the number of points used is at some time hence conveyed to the appropriate loyalty program for example, in a batch transmission.

Brief Description of the Drawings

Figure 1 is an architecture and state diagram of one embodiment representing the application of the present invention.

Figure 2 is a state diagram representing the registration process of the present invention.

Figure 3 is a state diagram representing the sign-in process of the present invention.

Figure 4 is a state diagram representing the retail transaction process of the present invention.

Detailed Description of the Invention

The present invention concerns a system for tracking and converting points awarded under independent or disparate loyalty programs into a universal credit or "currency" and applying the credit or currency towards the purchase of a variety of products and services or otherwise providing a discount toward the purchase on the basis of the credits. The system is available and accessible by users ,particularly registered members, through a computerized communications network such as the Internet. The system will be described in the context of the Internet, i.e., transmissions

over a TCP/IP or IPv6 protocol connection, although the invention may also be implemented in other network or communication applications and network protocols, including voice telephony.

The system can be accessed by users through any appropriate Internet or data communications means including voice telephony/POTS. In the preferred embodiment, users access the system on the Internet via one or more web pages implementing the system, as described herein in further detail. Users could also access the system via the Internet web pages of affiliated retailers and/or loyalty program sponsors participating in the system.

The system and the procedures for tracking and converting award points are illustrated in Figures 1-4 through the use of state diagrams. Figure 1 depicts the overall architecture and state transitions of the system. It can be seen in Figure 1 that the system can be broken down into several subordinate flows or substate diagrams. These are depicted in Figures 2-4.

In Figure 1, state 100 depicts the initial or Welcome State encountered by the user entering the system by means of, e.g., an Internet web page established for the system. This Welcome State 100 would be encountered, and the welcome screen viewed by the user, if the user enters the system, for example, by the web page established as the system home page by the system's administrator. Welcome State 100 could also be encountered by the user through other routes. For example, other URL web addresses could be established that, when entered and resolved by a name server, automatically direct the user to a server implementing Welcome State 100 of the

system. Alternatively, other Internet web pages could provide a link to Welcome State 100.

Welcome State 100 provides several options for the user. Typically, Welcome State 100 would include information concerning the system such as how the system operates and the loyalty programs and retailers sponsoring, affiliated with or otherwise involved in the system.

As the system is described, it will be appreciated that at various states, certain information could be provided directly at a particular state or, in the alternative, the information could be provided at a separate state. A connection, such as an http/HTML hypertext link, could be provided between the states. Such connections allow the user to easily obtain the linked information.

In an embodiment of the present invention depicted in Figure 1, if the user wishes to view information concerning the system, the user can indicate this desire, for example, by clicking on the appropriate HTML link. By, for example, executing HTML links, getting HTML pages and forms, and posting to CGI scripts or executable routines located on a remote server, the user may proceed to Information State 102. Information State 102 may provide a variety of information concerning the system. Information State 102 also allows the user to return to Welcome State 100 or to proceed to Mall State 400.

In the preferred embodiment, Welcome State 100 also allows the user to obtain via, e.g., HTML pages, specific information concerning the system. Such specific information could include, for example, the terms, conditions and regulations governing qualifications for becoming users or members of the system, information concerning

qualification of award points and conversion into credits, and regulations governing purchasing transactions and credit or currency applications to such transactions.

If the user of the system desires information on specific regulations, the system proceeds to Terms and Conditions State 104. In the preferred embodiment, Terms and Conditions State 104 can be accessed through either Welcome State 100 or Information State 102. Also in the preferred embodiment, from Terms and Conditions State 104 the user can return to Welcome State 100, proceed to Information State 102 or proceed to Mall State 400.

In the preferred embodiment, Welcome State 100 contains several additional options. These options include allowing the user to register and enroll in the system. This option would be appropriate for users encountering the system for the first time and that wish to register and enroll in the program. This option would also be appropriate for unregistered users that have viewed the system previously but up to this point have not enrolled in the system.

Another option available on Welcome State 100 would be allowing the user to proceed to sign in with the system. This option would be appropriate for users that are already registered and enrolled in the system and that wish to obtain information concerning their award points or system credits or that wish to shop at retailers linked to or accessible via the system.

Another option preferably provided within Welcome State 100 would be to allow the user to proceed directly to Mall State 400. This option could be appropriate either for users that are not registered with the system or users that are registered with the system.

Figure 2 depicts a state transition diagram showing a procedure for an unregistered user to register with the system after initially entering the system through Welcome State 100. The initial state of the registration process is shown as Registration State 200. At Registration State 200, the user provides information as requested by the system. This information could include, but is not limited to, the name and address of the user, and a unique identification code and password or other authentication data such as a digital certificate or biometric data. The information may then be recorded with the system and the user may then proceed to Initial Account State 202.

At Initial Account State 202, the user enters information concerning the eligible loyalty programs in which the user is a participating member. For example, the user could be enrolled in one or more airline frequent flyer programs, hotel frequent lodging programs and car rental frequent renting programs. For all loyalty programs that are eligible for participation in the system, the user enters appropriate information at Initial Account State 202. This information could include the name of or company sponsoring the loyalty program, the name of the user as it appears on each eligible loyalty program, the user's account number for each such program, and any PIN or authentication data of the user.

In the preferred embodiment, a menu listing of all loyalty program partners participating in the system is provided to the user through the use of pull-down menus. This allows the user to easily see all of the participating loyalty program sponsors or partners, click on the appropriate sponsor and then enter the appropriate information concerning that program.

After the user enters all of the required information concerning the loyalty programs of the participating sponsors that the user wishes to include in his or her system profile, the information is confirmed for accuracy. This confirmation can be performed in a variety of manners. In the preferred embodiment, the system electronically communicates with each sponsor that the user has requested for inclusion. This communication could be performed by the system accessing the Internet website of each designated sponsor in order to obtain and confirm the user's information.

In addition to verifying the account information of the user for each designated sponsor, the system also either obtains or verifies the amount of available award points the user has been awarded by each participating sponsor. This information may then be stored along with other user information in Account Status State 210.

The system may then, for example, proceed to Account Verification State 204. If the information provided by the user cannot be verified by the system, the user may be returned to Initial Account State 202, and, if desired, asked to reenter or correct the information that could not be verified. If the information is verified by the system, the information is stored at Account Status State 210.

Once the registration and account information of the user has been verified, the system may collect award points or other appropriate current points awarded to the registered user by each loyalty program sponsor and calculate the equivalent value of each point or mile. The system may then calculate the total number of points awarded by each sponsor into a single unit system credit or other value unit at Conversion State

206. This information concerning the credits is then transferred and stored at Account Status State 210.

After calculation of the user's award points into a uniform system credit or currency, the user may proceed to Registration Confirmation State 208 where the user may be informed that his or her registration has been confirmed. The user can then proceed to Mall State 400.

In a preferred embodiment, a user only has to enter registration information into the system once and may then be regarded as a system "member." The system preferably allows the user or member to add or delete loyalty programs to be available through the system at any time. The relevant information concerning additional loyalty programs, such as name, and verification and authentication information, can be verified at the time the new loyalty programs are added by the user.

In addition to increasing the ease of use of the system by a user, this feature also results in the verification of the user's account and credits information taking place prior to the user engaging in a transaction. In this manner, verification may be relatively transparent to the user, so that the transaction is not slowed down or delayed by the verification process. This verification process also allows for the user's transaction to occur even if the loyalty program sponsor site is unavailable at the time of the transaction, since the information from the sponsor site has already been gathered and verified. Also in a preferred embodiment, the system allows the user to access or update his or her profile information at any time.

It will be appreciated that throughout the system, the user may exit the system at any time. The exit feature could be achieved in a variety of manners. For instance, an

exit command could be provided at one or more interfaces, e.g., HTML pages within the system. The user could then exit the program by activating this command. In one embodiment, after activating the exit command, the user proceeds to a Confirmation State wherein the user's desire to exit the system is confirmed. This allows the user to remain in the system if activating this command was in error or the user changes his or her mind about exiting the system.

Figure 3 depicts the states involved in the procedure for allowing a user that is already enrolled, e.g., as a "member," in the system to sign into the system. At Sign-in State 300, the user is asked to provide appropriate identifying information. Such information would typically include the user's identification code and unique password or other authentication data. In a preferred embodiment of the subject invention, the login/authentication communication link and subsequent links are established using a secure protocol such as https, or another suitable PKI, tunneling, or key encryption scheme.

Once the user has entered the requisite information, the information is verified by the system at Sign-in Verification State 302. If the user's sign-in is not verified by the system at Sign-in Verification 302, the user is returned to Sign-in State 300 and asked to reenter the appropriate information. The system then attempts to verify the new information at Sign-in Verification State 302. If the system cannot verify the new information entered by the user, then the user is returned to Sign-in State 300 and again requested to enter the correct information.

In an alternate embodiment, the user is allowed a predetermined number of chances to enter the correct identification code and password. Once the user has

reached the limit of chances to enter the correct information, the user proceeds to Sign-in Problem State 304. At Sign-in Problem State 304, the user can either attempt to determine the reason for the system failing to verify the user's information or proceed to other sections of the system such as Registration State 200 or Mall State 400.

5 In a preferred embodiment, once a user signs in, the user is given the option of having the system remember the user's identification code and password thereby allowing for easier sign-in by the user. The memorialization of the user's identification code and password by the system can be accomplished in the appropriate manner. For example, a cookie could be placed on the user's computer by the system for accessing
10 at later times by the system.

Once the user's sign-in has been verified at Sign-in Verification State 302, the user proceeds to Sign-in Confirmation State 306. At Sign-in Confirmation State 306, the user can review his or her account information or proceed to shop at Mall State 400. If the user wishes to review his or her account information, the user proceeds to Account
15 Balance State 308. At Account Balance State 308, information concerning the user's loyalty program partner accounts and related converted credits is displayed.

In the preferred embodiment, additional information concerning the user's award points is provided. This information could include the total points awarded by each of the user's loyalty program partners added together cumulatively, the total value of these
20 points calculated as credits under the system, the purchases made to date by the user under the system and the total money saved by the user under such purchases.

If the user wishes to add additional loyalty programs to the system, the user proceeds to New Account State 310. At New Account State 310, the user is prompted

to enter the information concerning the new account. This information is then verified at New Account Verification State 312.

In the preferred embodiment, verification of the new account information is performed in the same manner as the initial account verification under Account Verification State 204. That is, the system contacts the sponsor of the new loyalty program to verify the user's information and account balance. If the information cannot be verified, the user is returned to New Account State 310 or is allowed to proceed through the system until the information is verified. Under this latter scenario, the user will typically not be allowed to use the award points of the new program until all verification of the new program information has been obtained by the system.

Once the new account information is verified by the system, the number of award points under the program may be calculated by the system into the system's credit units and be made available for shopping. The information concerning the new loyalty program account may be stored within Account Status State 210. Additionally, upon confirmation of the new account information, the user proceeds to New Account Confirmation State 314.

Once a registered user or member has signed in to the system or an unregistered user has registered with the system, the user may proceed to Mall State 400. Similarly, an unregistered user may also proceed to Mall State 400. At Mall State 400 information concerning the stores participating in the system is provided to the user. This information includes a listing of all the stores participating in the system. In an alternative embodiment, the information also includes current discounts, bargains or

promotional items available to the user. Information on gift certificates available for purchase by the user in the system can also be provided.

In the preferred embodiment, the information concerning the participating stores can be organized and displayed in a variety of manners as determined by the user. For example, the stores could be organized into categories that could be displayed to the user based on entered criteria. Thus, the user could display stores in a desired category, such as clothing or appliances, or other categories, such as discount or exclusive stores.

Once a user selects a particular store, the user proceeds to Retail Site State 402. Retail Site State 402 would provide specific information concerning the products or services available for purchase by the user. Retail Site State 402 could be provided to the user in a variety of fashions. In one embodiment, the information concerning the products or services available for purchase by the user at the particular store chosen by the user would be assembled and presented to the user by the system. In an alternate embodiment, the user could specify particular types of products and the system would provide a listing of those products and the participating stores selling those products. In an alternate embodiment, the system would connect the user with the specific web page of the store chosen by the user.

At Retail Site State 402, the user could again search the products and services available for purchase from the particular store. If the user wished to purchase products or services from the store, the user would proceed to Order State 404. In order to purchase the product or service, the user follows the ordering procedure for the

particular store chosen. When the user has completed the steps necessary for placing the user's order, the user proceeds to Eligible Transaction State 406.

At Eligible Transaction State 406, the system, or, in a preferred embodiment, a participating retailer's system may verify that the product or service to be purchased is eligible for use of the credits converted from the loyalty program partner award points in the system. If the transaction is not eligible for a discount, the user may be directed to Noneligible State 408.

At Noneligible State 408, the user may be informed of the fact that the transaction is not eligible for application of the system credits under the system and is asked if he or she wishes to continue with the purchase transaction, e.g., at full retail price. If the user wishes to proceed with the transaction, the user proceeds to Order State 404 where the sale of the product or service is completed. If the user does not wish to proceed with the transaction, the user can exit the system, return to Mall State 400 or Retail Site State 402.

If, at Eligible Transaction State 406, the transaction is determined by the system to be eligible for use of the credits converted by the system, the user proceeds to Account Availability State 410. However, if the user is not currently registered with the system, the user proceeds to Registration State 200 where they can register with the system.

At Registration State 200, the user provides information as requested by the system, such as name, address, identification code and authentication data. The information may be recorded with the system and the user proceeds to Initial Account State 202.

For all loyalty programs that are eligible for participation in the system, the user enters appropriate information at Initial Account State 202, such as the name of or company sponsoring the loyalty program, the user's name, the user's account number and any PIN or other authentication data, if required. In the preferred embodiment, a menu listing of all loyalty program partners participating in the system is provided to the user through the use of pull-down menus.

In an embodiment in which a user is prompted to enter all of the pertinent information concerning the loyalty program partners to be included in his or her system profile, the information may be confirmed for accuracy. This confirmation can be performed in a variety of manners, as previously discussed.

The system also either obtains or verifies the number of award points the user has been awarded by each participating partner. This may be effected, for example, by a database query directed to a server hosting a participating partner's point database. This information is stored along with the user's other information in Account Status 210.

The system then proceeds to Account Verification State 204. If the information provided by the user cannot be verified by the system, the user is returned to Initial Account State 202 and asked to reenter or correct the information that could not be verified. If the information is verified by the system, the information is stored at Account Status State 210.

Once the registration and account information of the user has been verified, the system collects the frequent flyer miles, award points, or other appropriate unredeemed points awarded to the registered user by each loyalty program partner. The system calculates the total number of points awarded by each partner into the system credits at

Conversion State 206. This information concerning the credits is then transferred and stored at Account Status State 210. After calculation of the user's award points into system credits, the user proceeds to Registration Confirmation State 208 where the user is informed that his or her registration has been confirmed.

5 At Account Availability State 410, current information regarding the user's award points under each loyalty program partner is displayed. The system proceeds to Credit Eligibility State 412. At Credit Eligibility State 412, the retail system determines whether the user's transaction is eligible for the use of the application of the system credits or currency. The system may then proceed to Credits Calculation State 414 and
10 determine the number of system credits for which the transaction is eligible. The system then calculates the number of the award points under the loyalty programs of the partners that are required in order to achieve the desired discount by the user. After these calculations, the system proceeds to Account Availability State 410 and the amount of the corresponding number of awarded points needed for the transaction is
15 displayed to the user.

 The system then proceeds to Account Option State 416 where the user can determine if he or she wishes to use the available credits or discount offered. If the user chooses not to use the available credits or discount, the system returns the user to Order State 404 where the user can complete the transaction.

20 If the user wishes to use the available credits or discount offered, the user indicates which loyalty program sponsors the user wishes to use towards the transaction and the amount of award points from each loyalty program sponsor or affiliate to be used towards the credits. The system then proceeds to Order Update

State 418 where the user's transaction is updated to show the credits applied to the purchase of the product or service and the updated cost of the transaction.

The system then proceeds to Order Placement State 420 where the final order is consummated and the order is placed with the retail store. After Order Placement State 420, the system proceeds to Account Update State 422. At Account Update State 422, the user's account information is updated to reflect the credits used by the user in the transaction to purchase the product or service. The system can also update the award points deducted from the appropriate affiliate sponsor accounts, notify the relevant affiliate sponsors or retailers and update the loyalty program points accordingly. This may be effected, for example, by database commands or instructions to servers hosting the loyalty programs database, or by SMTP or FTP transmissions to affiliate entities. Preferably, any communication with affiliate entities will be effected over a secure or encrypted channel, utilizing digital certificates and/or signatures. Communication between a system according to the present invention and affiliates may take place over, e.g., a TCP/IP connection, a dedicated line, direct dial-up connection, UDP transmission, or other network communication methods.

The system then proceeds to Savings State 424. At Savings State 424, the user's order is confirmed to the user. Additional information can be provided to the user as well. This information can include the current updated total award points held by the user in the system, the value of those total points in the system's credits, the amount of money saved by the user in the transaction through the credits applied by the system and the total amount of money saved by the user for all transactions under the system. The system then proceeds to Mall State 400 where the user can continue to shop.

In use, the system may provide for an effective and convenient means of allowing users to track loyalty program award points and applies the loyalty program award points towards the purchase of products and services from a wide variety of retailers. For illustration, in the following example, the program will be described in the context of frequent flyer programs.

As mentioned, the user can access the system in a wide variety of fashions. For example, the user could go to the Internet web site of the program or enter through the web site of a retailer participating in the program or through a sponsoring partner's web site. Once in the system, the user will be prompted to register with the program as a "member" or sign in if the user is already registered as a member.

If the user wishes to register, he or she may enter the information concerning user identification and authentication. The user may then be prompted to enter the information concerning the frequent flyer programs he or she wishes to include in the program, including the airline, membership number and any PIN or other authentication data. The system may then contact the web page of the indicated airline and verify the information entered by the user. The system may also obtain and store the information concerning the current balance of the user's frequent flyer points under each sponsor's program. The user can then proceed to the mall web page and shop. At the mall web page, the user can search the products available under the program or proceed to a particular store site.

Once the user wishes to purchase an item, he or she follows the procedures as specified by the particular retailer. The system then determines the eligibility of purchases for credits or discount application, the amount of the credits or discount that

can be applied and the amount of award points needed to obtain such credits or discount. The user then selects the frequent flyer programs she wishes to use towards the purchase of the product and the number of award points from each program to apply towards the credits. The system then applies the credits towards the purchase of the product, deducts the points used to obtain the credits and updates the status of the account balance accordingly.

While a preferred embodiment of the present invention has been described, it should be understood that various changes, adaptations and modifications may be made therein without departing from the spirit of the invention and the scope of the appended claims.

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